

初等學校 校舍 平面類型 面積 現況 研究

- 平面圖 分析 -

A Study on the Status of Plan Type and Area at Elementary School Facilities

- by Analyzing Architectural Plans-

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Rieu, Ho-Seoup

Abstract

This paper presents results from analysis of architectural plan drawings of 355 elementary schools recently designed for 4 years. These plans are analyzed by factors such as local distribution, number of classes, type of plan, total construction area, area per a class, area per a student, and area status of each space.

The purpose of this study is to provide fundamental resources for architectural designing and planning of elementary schools through finding trend and status of elementary school buildings that have no detailed data of area index.

The results of this study are as follows:

1. As a result from analyzing number of classes in the surveyed schools, schools having 36 classes are dominant and schools having 72 classes are also shown. Average number of classes is 34.1. This result reflects that elementary schools have been planned as large-scale schools.

2. In terms of type of plan, we found out that instead of disappearing traditional single corridor type building, the open school building that have multi-purpose spaces are mainly designed. In addition to that, there are few schools with large class rooms.

3. In the status of area of each school, they have much larger areas than areas provided by building guidelines. Secondly, there are some schools with two times area difference even though they have same class number. Therefore, it needs to adjust the school building guidelines to practical needs in the consideration of elementary school building for compulsory education.

Though the plans of recently designed school for 4 years are more differentiated than past, there are few schools planned by appropriate plan design and area distribution scheme. As a consequence, some improvements like improvement of building guidelines are desperate.

Keywords : Elementary School, Plan, number of class, Plan Design, Area

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1997 2000

2) 9) (1997

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961 : 1,680+3N (N)

3) , 4 4 , 1997.12 , 11 4
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-1> 가 119 33.6%
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1

	1997		1998		1999		2000		
	()	()	()	()	()	()	()	()	
10(378)	37.8	2(78)	39.0	8(341)	42.6	9(310)	34.4	29(1107)	38.2
9(308)	34.2	4(141)	35.3	2(62)	31.0	7(279)	39.9	22(790)	35.9
7(226)	32.3	6(220)	36.7	4(150)	37.5	3(108)	36.0	20(704)	35.2
8(288)	32.3	7(216)	30.9	6(210)	35.0	3(90)	30.0	24(774)	32.3
8(247)	30.9	3(97)	32.3	4(141)	35.3	2(91)	45.5	17(576)	33.9
3(87)	29.0	1(24)	24.0	3(108)	36.0	2(48)	24.0	9(267)	29.7
2(82)	41.0	2(82)	41.0	2(78)	39.0	6(192)	32.0	12(434)	36.2
27(859)	31.8	16(397)	37.3	35(1251)	35.7	41(1521)	37.1	119(4228)	35.5
6(207)	34.5	4(116)	29.0	8(279)	34.9	3(102)	34.0	21(704)	33.5
8(309)	38.6	1(12)	12.0	5(180)	36.0	2(60)	30.0	16(561)	35.1
4(132)	33.0	5(210)	42.0	3(96)	32.0	3(113)	37.7	15(551)	36.7
9(255)	28.3	1(42)	42.0	2(72)	36.0	8(210)	26.3	20(579)	29.0
4(144)	36.0	0(0)	0.0	2(66)	33.0	1(30)	30.0	7(240)	34.3
5(180)	36.0	2(66)	33.0	1(12)	12.0	2(72)	36.0	10(330)	33.0
5(122)	24.4	1(30)	30.0	1(36)	36.0	2(60)	30.0	9(248)	27.6
1(36)	36.0	1(18)	18.0	1(12)	12.0	2(72)	36.0	5(138)	27.6
116(3830)	33.0	56(1949)	34.8	87(3094)	35.6	96(3388)	35.0	355(12231)	34.5

2

		%			%			%	
29	26	89.7	13	44.8	5	17.2			
22	13	59.1	12	54.5	2	9.1			
20	8	40.0	9	45.0	10	50.0			
24	17	70.8	15	62.5	16	66.7			
17	6	35.3	6	35.3	11	64.7			
9	8	88.9	1	11.1	9	100			
12	3	25.0	9	75.0	1	8.3			
119	41	34.5	46	38.7	86	72.3			
21	8	38.1	16	76.2	13	61.9			
16	5	31.3	10	62.5	2	12.5			
15	3	20.0	5	33.3	10	66.7			
20	17	85.0	18	90.0	9	45.0			
7	2	28.6	7	100	1	14.3			
10	0	0.0	9	90.0	8	80.0			
9	8	88.9	4	44.4	5	55.6			
5	1	20.0	4	80.0	2	40.0			
355	166	46.8	184	51.8	190	53.5			

166 46.8%
2000

62 64.6%

(88.9%), (89.7%), (88.9%), (85%), (70.8%)

184

51.8%
가 100%
가 90% 190 (53.5%)

2) < -3>

36 가 143
40.5% 30 (42
) 24 (38) 가 11.8%,
10.7% 42 가 29 8.2%

3

	1997	1998	1999	2000		1997	1998	1999	2000	
6	2	0	0	0	2	33	3	0	0	3
8	1	0	0	0	1	34	3	1	0	4
12	0	1	2	0	3	35	1	1	0	2
13	1	0	0	0	1	36	46	17	38	143
14	1	0	1	0	2	37	1	0	1	2
15	0	0	0	0	0	38	1	0	1	2
16	0	0	1	0	1	40	2	0	0	2
17	0	0	0	1	1	41	1	0	1	2
18	2	1	0	5	8	42	7	6	6	29
20	1	0	0	0	1	43	0	2	0	2
21	0	1	0	0	1	44	0	0	3	3
22	1	0	1	0	2	45	1	0	5	7
23	0	0	1	0	1	46	2	1	0	3
24	11	5	9	13	38	48	4	4	5	16
25	1	0	1	0	2	50	0	0	0	3
26	1	1	0	1	3	51	0	1	0	2
27	1	0	0	0	1	53	1	0	1	2
28	0	1	0	1	2	54	0	1	0	3
29	3	0	0	1	4	55	0	0	0	1
30	15	11	8	8	42	56	0	0	1	3
31	1	0	0	1	2	72	0	0	1	1
32	1	1	0	0	2		116	56	87	355

12 3
36 가 226
63.6% 56
(3 , () , (,
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34.1 ,
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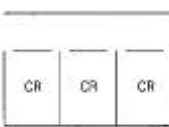
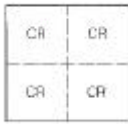

1995 , 1990 ,
 < -4>

< -5> 16
 16
 6 , A : (,
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) C : , D : (+
 + , +) E :
 , F :

C 192 54.1%
 A 77
 21.7% D
 E 10
 가

(,)

4.

(a)		20 (9.0m × 7.5m 9.0m × 7.2m) , 5 (2.7m)
(b)		
(c)		3.0m
(d)		
(e)		가 20
(f)		3m 가 20
(g)		2 4
(h)		가 가 가 가

< -7> < -8> , < -9> < -10> . (254
 , 6, 12, 18 가
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 (B) 1 , 1 < -11>
 7 (A) .

()		(㎡)	(㎡)
24 (36)	(A)	10068.5	4661.3
	1	419.5	246.7
	1	10.5	4.9
30 (40)	(A)	9729	5238.8
	1	324.3	174.6
	1	8.1	4.4
36 (137)	(A)	12277.5	5675.5
	1	341	157.7
	1	8.5	3.9
42 (27)	(A)	13871.5	6183.5
	1	330.3	147.2
	1	8.3	3.7
48 (14)	(A)	13305.6	7486
	1	277.2	156
	1	6.9	3.9

8 (B) .

()			
24 (36)	(B)	8170.4	4399.9
	1	340.4	183.3
	1	8.5	4.6
30 (40)	(B)	8432.5	4752.8
	1	281.1	158.4
	1	7	4
36 (137)	(B)	9998.8	5207.4
	1	277.7	144.6
	1	7.1	3.6
42 (27)	(B)	11953.6	5820
	1	284.6	138.6
	1	7.1	3.5
48 (14)	(B)	12070.4	7296.3
	1	251.5	152
	1	6.3	3.8

9 (A)

	()	1997	1998	1999	2000
(A) (㎡)	24(36)	5921.9	6822.4	6683.7	7732.1
	30(40)	6458.9	6692.9	7709.7	8898.2
	36(137)	7629.7	8231.4	8381.0	9300.6
	42(27)	7818.3	9080.3	10089.3	10752.5
	48(14)	9856.8	8314.1	10228.9	11612.8
1 (A) (㎡)	24(36)	246.7	284.3	278.5	322.2
	30(40)	215.3	223.1	257.0	296.6
	36(137)	211.9	228.6	232.8	258.3
	42(27)	186.2	216.2	240.2	256.0
	48(14)	202.7	173.2	213.1	241.9
1 (A) (㎡)	24(36)	6.2	7.1	7.0	8.1
	30(40)	5.4	5.6	6.4	7.4
	36(137)	5.3	5.7	5.8	6.5
	42(27)	4.7	5.4	6.0	6.4
	48(14)	5.1	4.3	5.3	6.0

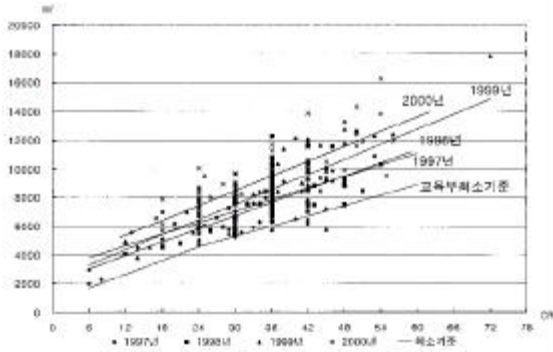
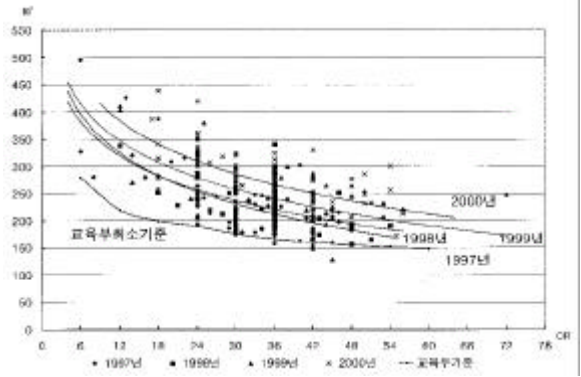
10 (B)

	()	1997	1998	1999	2000
(B) (㎡)	24(36)	5351.9	6159.8	6041.2	6905.3
	30(40)	5980.5	6237.8	6927.4	7616.8
	36(137)	6973.3	7550.7	7900.4	8341.5
	42(27)	7273.5	8480.8	9438.9	9679.4
	48(14)	8611.6	8163.9	9124.9	10659.2
1 (B) (㎡)	24(36)	223.0	256.7	251.7	287.7
	30(40)	199.4	207.9	230.9	253.9
	36(137)	193.7	209.7	219.5	231.7
	42(27)	173.2	201.9	224.7	230.5
	48(14)	179.4	170.1	190.1	222.1
1 (B) (㎡)	24(36)	5.6	6.4	6.3	7.2
	30(40)	5.0	5.2	5.8	6.3
	36(137)	4.8	5.2	5.5	5.8
	42(27)	4.3	5.0	5.6	5.8
	48(14)	4.5	4.3	4.8	5.6

11 (B)

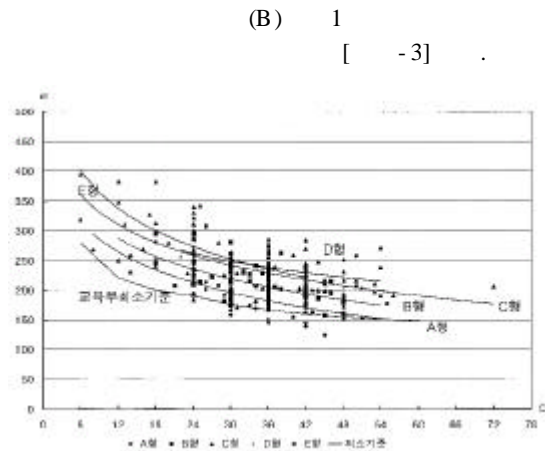
	()	A	B	C	D	E
(㎡)	24	5314.7	5662.1	6380.1	6273.7	6954.2
	30	5787.4	6405.5	6859.2	7566.9	7769.5
	36	6722.9	7262.8	7262.8	8871.1	8058.8
	42	6814.5	8263.2	9611.4		9203.9
	48	7323.6	8483.3	9526.4		
1 (㎡)	24	221.4	235.9	265.8	261.40	289.76
	30	192.9	213.5	228.6	252.2	258.98
	36	186.7	201.7	201.7	236.6	223.86
	42	162.2	196.7	228.8		219.14
	48	152.6	176.7	198.5		
1 (㎡)	24	5.5	5.9	6.6	6.54	7.24
	30	4.8	5.3	5.7	6.3	6.47
	36	4.7	5.0	5.0	5.9	5.60
	42	4.1	4.9	5.7		5.48
	48	3.8	4.4	5.0		

(A)
 [-1]
 가 337 98.8% 가
 1.1% 가
 (2)가



2 1 (A)
 130m²
 495m²
 (A) 가
 가 1 가
 가 가
 가 가
 1
 1997, 1998
 1999 2000
 0% 11% 가
 (B) 1
 [-3]

1 (A)
 < -7>
 (A) 2
 (24 (: 4661.3m², :
 10068.5m², 2.16), 36 (: 5675.5m²,
 : 12277.5m², 2.16), 42 (: 6183.5m²,
 : 13871.5m², 2.24) 가
 가 가
 가 가 가
 가 가 가
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(2) 1 (A) 1 (B)
 [-2] A B
 B C · D · E 32.2m²(36)

3가

341

- 12>

7

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가

가 166

가 175

가

)가

< - 13>

< - 12>

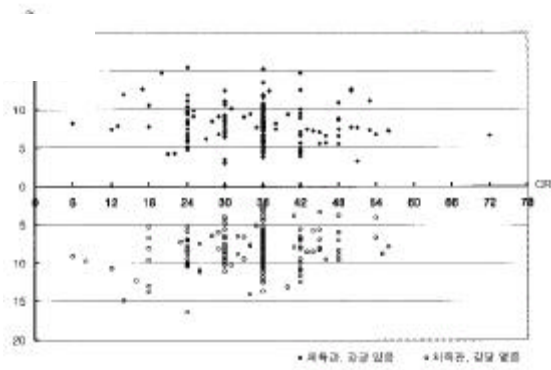
가 166

13

14

()		A	B	C	D	E
24 (20)		33.2	46.3	59.0	45.8	33.7
		33.2	32.8	34.4	41.3	33.7
		33.2	39.0	44.9	43.5	33.7
30 (19)		37.1	50.1	53.3	48.0	52.7
		35.1	42.4	41.8	39.9	46.9
		36.1	46.2	46.4	43.9	49.8
36 (64)		42.7	49.5	63.4	48.0	47.9
		35.4	40.1	39.2	36.7	47.9
		39.7	46.1	48.7	42.9	47.9
42 (13)			45.7	54.7		41.7
			45.7	40.0		41.7
			45.7	48.3		41.7
48 (6)			42.5	52.1		
			42.5	49.4		
			42.5	50.5		
		39.3	44.9	48.0	43.2	44.6
24 (20)		32.5	21.8	36.5	27.3	26.6
		32.5	20.4	8.3	26.5	26.6
		32.5	21.1	22.6	26.9	26.6
30 (19)		29.3	25.7	26.5	36.2	22.6
		27.7	21.7	17.9	21.5	20.2
		28.5	23.8	20.6	28.9	21.4
36 (64)		35.4	33.2	28.7	25.2	22.4
		20.3	19.6	11.7	19.4	22.4
		28.3	24.8	20.2	22.8	22.4
42 (13)			25.0	28.7		27.3
			25.0	14.9		27.3
			25.0	20.2		27.3
48 (6)			23.6	31.2		
			23.6	18.0		
			23.6	22.9		
		28.6	23.5	20.7	24.3	23.8

()		A	B	C	D	E
24 (16)		43.0	39.9	57.9		59.0
		36.3	39.9	40.3		59.0
		39.9	39.9	48.4		59.0
30 (21)		46.8	59.5	62.3		
		36.8	45.5	46.0		
		42.2	51.0	53.1		
36 (73)		50.6	61.4	62.1	46.1	42.9
		39.2	40.8	41.5	46.1	42.9
		43.4	50.7	54.0	46.1	42.9
42 (14)		54.0	54.5	57.9		
		43.9	54.5	40.4		
		47.8	54.5	51.9		
48 (8)		50.9	49.4	68.1		
		49.3	49.2	61.2		
		50.1	49.3	65.2		
		44.1	49.9	53.5	46.1	48.9
24 (16)		38.7	29.9	30.0		8.3
		30.0	29.9	15.5		8.3
		33.2	29.9	22.5		8.3
30 (21)		35.7	29.6	25.9		
		29.2	17.1	14.1		
		31.9	24.0	20.7		
36 (73)		35.1	34.2	32.6	28.4	29.5
		26.6	13.3	12.0	28.4	29.5
		30.4	24.6	21.1	28.4	29.5
42 (14)		32.5	26.9	30.9		
		27.0	26.9	17.9		
		30.0	26.9	23.6		
48 (8)		29.2	30.2	18.2		
		22.9	29.9	13.9		
		26.0	30.0	16.4		
		30.7	25.0	20.8	28.4	23.5

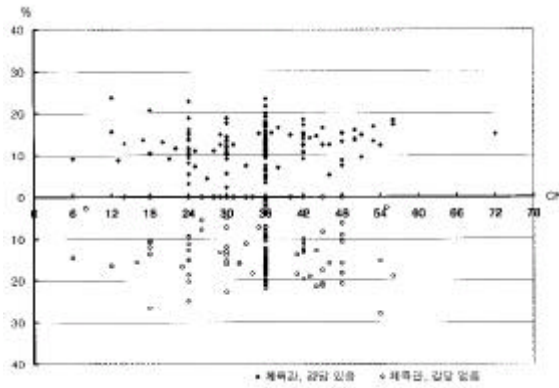


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4.55% 0.0% 15.6% ,
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8.

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가

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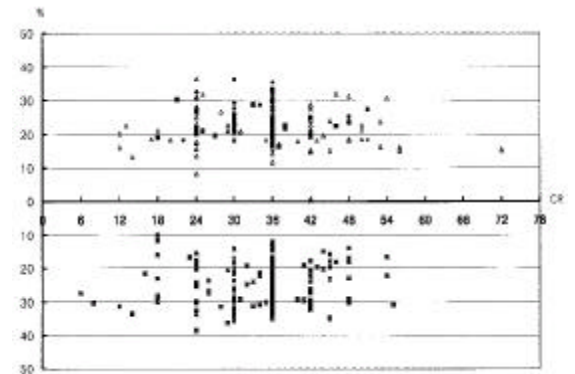
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- E - A

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가

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165
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 2.7% 28.1%

5.

4 (1997 - 2000)
 355

1. 4 가 가 72
 36 가 가 34.5

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3. 가 2 가 가 1997 가

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1) (), 1997.9

2) , 4 4 , 1997.12

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4) , 11 4 , 1995. 4

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8) 가 , 가

9) 가 , 가

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